

# What Works Clearinghouse™

**Beginning Reading****February 2013**

## Words Their Way™

No studies of *Words Their Way*™ that fall within the scope of the Beginning Reading review protocol meet What Works Clearinghouse (WWC) evidence standards. The lack of studies meeting WWC evidence standards means that, at this time, the WWC is unable to draw any conclusions based on research about the effectiveness or ineffectiveness of *Words Their Way*™ on beginning readers. Additional research is needed to determine the effectiveness or ineffectiveness of this intervention.

### Program Description<sup>1</sup>

*Words Their Way*™ is an approach to phonics, vocabulary, and spelling instruction for students in kindergarten through high school. The program can be implemented as a core or supplemental curriculum and aims to provide a practical way to study words with students. The purpose of word study (which involves examining, manipulating, comparing, and categorizing words) is to reveal logic and consistencies within written language and to help students achieve mastery in recognizing, spelling, and defining specific words.

The program's main textbook, *Words Their Way: Word Study for Phonics, Vocabulary, and Spelling Instruction*,<sup>2</sup> focuses on the five stages of spelling development and contains more than 250 ready-to-use activities.

The five developmental stages include the emergent stage (Pre-K to middle of first grade), the letter name-alphabetic stage (kindergarten to middle of second grade), the within word pattern stage (first grade to middle of fourth grade), the syllables and affixes stage (third grade to eighth grade), and the derivational relations stage (fifth grade to twelfth grade). Activities in each chapter include concept categorizing, word sorting, and games. Teachers use these activities to focus students' attention on critical features of words including sound, pattern, and meaning. Students examine words to discover the regularities, conventions, and patterns in relationships between speech sounds and corresponding written words.

*Words Their Way*™ also includes five additional stage-specific volumes, providing a complete curriculum of word building and sorting activities and detailed instructions for the teacher. Other related volumes are designed to meet the needs of English language learners and students in the intermediate and secondary levels.

This review of *Words Their Way*™ for the Beginning Reading topic area focuses on reading outcomes of students in grades K–3.

### Research<sup>3</sup>

The WWC identified 29 studies of *Words Their Way*™ for beginning readers that were published or released between 1983 and 2012.

One study is within the scope of the Beginning Reading review protocol but does not meet WWC evidence standards. The study uses a quasi-experimental design but does not establish that the comparison group was comparable to the intervention group prior to the start of the intervention.

Fifteen studies are out of the scope of the Beginning Reading review protocol because they have an ineligible study design.

- Eleven studies are literature reviews or meta-analyses.
- Four studies do not use a comparison group design, a regression discontinuity design, or a single-case design.

Thirteen studies are out of the scope of the Beginning Reading review protocol for reasons other than study design.

- Eleven studies do not use a sample aligned with the protocol—the sample does not fall within the Beginning Reading grade range of K–3.
- Two studies include fewer than 50% general education students.

### References

#### Study that does not meet WWC evidence standards

Schacter, J. (2003). Preventing summer reading declines in children who are disadvantaged. *Journal of Early Intervention, 26*(1), 47–58. The study does not meet WWC evidence standards because it uses a quasi-experimental design in which the analytic intervention and comparison groups are not shown to be equivalent.

#### Studies that are ineligible for review using the Beginning Reading Evidence Review Protocol

Al Otaiba, S., Hosp, J. L., Smartt, S., & Dole, J. A. (2008). The challenging role of a reading coach, a cautionary tale. *Journal of Educational & Psychological Consultation, 18*(2), 124–155. The study is ineligible for review because it does not use a comparison group design or a single-case design.

Barone, D. M., & Xu, S. H. (2008). *Literacy instruction for English language learners, pre-K-2*. New York: Guilford Press. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Baumann, J. F., Font, G., Edwards, E. C., & Boland, E. (2005). Strategies for teaching middle-grade students to use wordpart and context clues to expand reading vocabulary. In E. H. Hiebert & M. L. Kamil (Eds.), *Teaching and learning vocabulary: Bringing research to practice* (pp. 179–205). Mahwah, NJ: Lawrence Erlbaum Associates. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

Bender, W. N., & Larkin, M. J. (2003) *Reading strategies for elementary students with learning difficulties*. Thousand Oaks, CA: Corwin Press. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Cabell, S. Q., Justice, L. M., Zucker, T. A., & McGinty, A. S. (2009). Emergent name-writing abilities of preschool-age children with language impairment. *Language, Speech, and Hearing Services in Schools, 40*(1), 53–66. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

Carlisle, J. F. (2010). Effects of instruction in morphological awareness on literacy achievement: An integrative review. *Reading Research Quarterly, 45*(4), 464–487. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Catone, W. V., & Brady, S. A. (2005). The inadequacy of individual educational program (IEP) goals for high school students with word-level reading difficulties. *Annals of Dyslexia, 55*(1), 53–78. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

Duffy, A. M. (2001). Balance, literacy acceleration, and responsive teaching in a summer school literacy program for elementary school struggling readers. *Reading Research and Instruction, 40*(2), 67–100. The study is ineligible for review because it does not use a comparison group design or a single-case design.

Harris, L. A. (2007). Adolescent literacy: Wordy study with middle and high school students. *Teaching Exceptional Children Plus, 3*(4), 1. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

Ivey, G., & Broaddus, K. (2007). A formative experiment investigating literacy engagement among adolescent Latina/o students just beginning to read, write, and speak English. *Reading Research Quarterly, 42*(4), 512–545. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

Joseph, L. M. (2005). Understanding and implementing neuropsychologically based literacy interventions. In R. C. D'Amato, E. Fletcher-Janzen, & C. R. Reynolds (Eds.), *Handbook of school neuropsychology* (pp. 738–757). Hoboken, NJ: Wiley. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Joseph, L. M., & Seery, M. E. (2004). Where is the phonics? A review of the literature on the use of phonetic analysis with students with mental retardation. *Remedial and Special Education*, 25(2), 88–94. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Kirk, C., & Gillon, G. T. (2009). Integrated morphological awareness intervention as a tool for improving literacy. *Language, Speech, and Hearing Services in Schools*, 40(3), 341–351. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

Koda, K. (2007). Reading and language learning: Crosslinguistic constraints on second language reading development. *Language Learning*, 57(1), 1–44. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Linan-Thompson, S., Vaughn, S., Hickman-Davis, P., & Kouzekanani, K. (2003). Effectiveness of supplemental reading instruction for second-grade English language learners with reading difficulties. *The Elementary School Journal*, 103(3), 221–238. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample includes less than 50% general education students.

Maslanka, P., & Joseph, L. M. (2002). A comparison of two phonological awareness techniques between samples of preschool children. *Reading Psychology*, 23(4), 271–288. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

McLaughlin, S. (2009). *The effects of using Words Their Way to improve spelling success on third grade students*. Cedar Rapids, IA: Graceland University. The study is ineligible for review because it does not use a comparison group design or a single-case design.

McMaster, K. L., Parker, D., & Jung, P. (2012). Using curriculum-based measurement for beginning writers within a response to intervention framework. *Reading Psychology*, 33(1–2), 190–216. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Meseck, S. (2009). *The effects of using Words Their Way in the orthographic knowledge of second grade students*. Cedar Rapids, IA: Graceland University. The study is ineligible for review because it does not use a comparison group design or a single-case design.

Mesmer, H. A. E. (2008). *Tools for matching readers to texts: Research-based practices*. New York: Guilford Press. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Montgomery, J. K., & Hayes, L. L. (2005). Literacy transition strategies for upper elementary students with language-learning disabilities. *Communication Disorders Quarterly*, 26(2), 85–93. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

Nagy, W., Berninger, V. W., & Abbott, R. D. (2006). Contributions of morphology beyond phonology to literacy outcomes of upper elementary and middle-school students. *Journal of Educational Psychology*, 98(1), 134–147. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

O'Brien, B. A., Wolf, M., Miller, L. T., Lovett, M. W., & Morris, R. (2011). Orthographic processing efficiency in developmental dyslexia: An investigation of age and treatment factors at the sublexical level. *Annals of Dyslexia*, 61(1), 111–135. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample includes less than 50% general education students.

Paris, S. G., Morrison, F. J., & Miller, K. F. (2006). Academic pathways from preschool through elementary school. In P. Alexander & P. Winne (Eds.), *Handbook of research in educational psychology (Second edition)* (pp. 61–85). Mahwah, NJ: Lawrence Erlbaum Associates. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Rathvon, N. (2008). *Effective school interventions: Evidence-based strategies for improving student outcomes* (2nd ed.). New York: Guilford Press. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Sawyer, D. J., & Joyce, M. T. (2006). Research in spelling: Implications for adult basic education. In J. Comings, B. Garner, & C. Smith (Eds.), *Review of adult learning and literacy, volume 6* (pp. 71–112). Oxon, UK: Routledge. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Sterbinsky, A. (2007). *Words Their Way spelling inventories: Reliability and validity analyses*. Memphis, TN: Center for Research in Education Policy. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

Yeh, Y., McTigue, E. M., & Joshi, R. M. (2012). Moving from explicit to implicit: A case study of improving inferential comprehension. *Literacy Research and Instruction*, 51(2), 125–142. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample is not within the specified age or grade range.

### Endnotes

<sup>1</sup> The descriptive information for this program was obtained from publicly available sources: the program's website (<http://www.pearsonschool.com/wwt>, downloaded September 2012) and Bear et al. (2012). The WWC requests distributors to review the program description sections for accuracy from their perspective. The program description was provided to the distributor in September 2012, and the WWC incorporated feedback from the distributor. Further verification of the accuracy of the descriptive information for this program is beyond the scope of this review. The literature search reflects documents publicly available by April 2012.

<sup>2</sup> Bear, D., Invernizzi, M., Templeton, S., & Johnston, F. (2012). *Words Their Way: Word study for phonics, vocabulary, and spelling instruction* (5th ed.). Upper Saddle River, NJ: Pearson Education, Inc.

<sup>3</sup> The studies in this report were reviewed using the Evidence Standards from the WWC Procedures and Standards Handbook (version 2.1), along with those described in the Beginning Reading review protocol (version 2.1). The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available.

### Recommended Citation

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## Glossary of Terms

<b>Attrition</b>	Attrition occurs when an outcome variable is not available for all participants initially assigned to the intervention and comparison groups. The WWC considers the total attrition rate and the difference in attrition rates across groups within a study.
<b>Clustering adjustment</b>	If intervention assignment is made at a cluster level and the analysis is conducted at the student level, the WWC will adjust the statistical significance to account for this mismatch, if necessary.
<b>Confounding factor</b>	A confounding factor is a component of a study that is completely aligned with one of the study conditions, making it impossible to separate how much of the observed effect was due to the intervention and how much was due to the factor.
<b>Design</b>	The design of a study is the method by which intervention and comparison groups were assigned.
<b>Domain</b>	A domain is a group of closely related outcomes.
<b>Effect size</b>	The effect size is a measure of the magnitude of an effect. The WWC uses a standardized measure to facilitate comparisons across studies and outcomes.
<b>Eligibility</b>	A study is eligible for review and inclusion in this report if it falls within the scope of the review protocol and uses either an experimental or matched comparison group design.
<b>Equivalence</b>	A demonstration that the analysis sample groups are similar on observed characteristics defined in the review area protocol.
<b>Extent of evidence</b>	An indication of how much evidence supports the findings. The criteria for the extent of evidence levels are given in the WWC Procedures and Standards Handbook (version 2.1).
<b>Improvement index</b>	Along a percentile distribution of students, the improvement index represents the gain or loss of the average student due to the intervention. As the average student starts at the 50th percentile, the measure ranges from -50 to +50.
<b>Multiple comparison adjustment</b>	When a study includes multiple outcomes or comparison groups, the WWC will adjust the statistical significance to account for the multiple comparisons, if necessary.
<b>Quasi-experimental design (QED)</b>	A quasi-experimental design (QED) is a research design in which subjects are assigned to intervention and comparison groups through a process that is not random.
<b>Randomized controlled trial (RCT)</b>	A randomized controlled trial (RCT) is an experiment in which investigators randomly assign eligible participants into intervention and comparison groups.
<b>Rating of effectiveness</b>	The WWC rates the effects of an intervention in each domain based on the quality of the research design and the magnitude, statistical significance, and consistency in findings. The criteria for the ratings of effectiveness are given in the WWC Procedures and Standards Handbook (version 2.1).
<b>Single-case design</b>	A research approach in which an outcome variable is measured repeatedly within and across different conditions that are defined by the presence or absence of an intervention.
<b>Standard deviation</b>	The standard deviation of a measure shows how much variation exists across observations in the sample. A low standard deviation indicates that the observations in the sample tend to be very close to the mean; a high standard deviation indicates that the observations in the sample tend to be spread out over a large range of values.
<b>Statistical significance</b>	Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups. The WWC labels a finding statistically significant if the likelihood that the difference is due to chance is less than 5% ( $p < 0.05$ ).
<b>Substantively important</b>	A substantively important finding is one that has an effect size of 0.25 or greater, regardless of statistical significance.

Please see the WWC Procedures and Standards Handbook (version 2.1) for additional details.